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Flexibility, Labour Retention and Productivity in the EU

Abstract

This paper examines the relationship between internal flexibility, the employment of fixed-term contract workers and productivity in 27 European Union countries. Drawing on European Company Survey data, the paper assesses whether establishments that employ on a fixed-term basis experience higher productivity than their competitors and stronger labour productivity improvements over time. These issues are of importance, given the recent weakness of productivity growth in many EU member countries, the steps that governments have taken to relax rules relating to the employment of fixed-term workers, and the emphasis placed on contractual flexibility within the European Commission's flexicurity agenda. The paper finds that establishments that do not use fixed-term contracts enjoy productivity advantages over those that do. Establishments that employ on a fixed-term basis but retain workers once their fixed-term contract has expired perform better than those that do not retain workers. The findings also show that establishments that pursue internal flexibility report both higher productivity than competitors and productivity increases over time. In addition, they are more likely to retain workers who have reached the end of a fixed-term contract.

Key words: European Union, fixed-term employment, flexibility, labour utilisation, performance, productivity

Introduction

European economies are continuing to experience the after-effects of the economic crisis that began in 2008. Although employment levels have recovered in some European Union (EU) member states, stubborn economic difficulties remain. Aside from the specific difficulties that have plagued those countries that suffered sovereign debt crises after 2008, strong economic growth in the EU has yet to re-materialise. In contrast to previous post-recession periods, productivity in most EU member states has failed to recover from the Great Recession. In an effort to reignite economic growth, national governments have implemented reforms intended to liberalise labour markets. In some EU countries the reforms have included a dilution of employment protection legislation (EPL) and increased freedom for firms to employ workers on a fixed-term basis. These reforms are intended to increase firms' 'numerical' flexibility; in other words, to make it easier for employers to adjust the number of workers they employ and thus their labour costs.

An alternative 'internal' approach to achieving 'flexibility' involves making adjustments to the organisation of work and the utilisation of workers within organisations (Martinez-Sánchez, Vela-Jiménez, Pérez-Pérez & de-Luis-Carnicer, 2011, p. 717). Such flexibility might be secured by practices such as flexible working time, creating teams composed of polyvalent workers and investments in education and training. While the European Commission has emphasised the potential of this form of flexibility to contribute to 'high performance' (e.g. European Commission, 2007), the focus of recent policy reforms has been predominantly on enhancing flexibility in relation to dismissals and the use of fixed-term contracts (Author B, 2015).

This paper examines the implications of internal flexibility and the use of fixed-term contracts for company performance and suggests that recent attempts by some governments to make it easier for firms to dismiss workers and make use of fixed-term contracts are unlikely to unleash a substantial improvement in labour productivity. We show that firms that do not employ workers on fixed-term contracts, or that retain workers following the completion of fixed-term contracts, tend to enjoy a productivity advantage over those that employ, but do not retain, workers on fixed-term contracts. The paper draws on the 2009 European Company Survey and covers all 27 countries that were EU members in 2009. The paper begins with an overview of the labour market reforms undertaken by EU economies in the period since 2008. It goes on to review studies that have assessed the consequences of different approaches to flexibility for the performance of organisations. This is followed by a description of the research methods used for

the present paper and a presentation of our empirical findings. The paper concludes with some sceptical reflections on the current trajectory of labour market policy reforms in the EU.

Productivity, flexibility and labour market reform

In the hope of stimulating job growth and economic recovery after the 2008 financial crisis, governments in the EU have implemented substantial labour market reforms. Many of the reforms have been influenced by country-specific recommendations, issued by the European Commission since 2011 and based on annual reviews of the economic performance of each EU member state. The European Commission encourages EU member states to develop their labour market policies in ways that are consistent with its concept of ‘flexicurity’, defined as an ‘integrated strategy to enhance, at the same time, flexibility and security in the labour market’ (European Commission, 2007: 10). According to the Commission, the introduction of greater contractual flexibility along with active labour market measures and increases in lifelong learning will promote employment, reduce the duration of unemployment and improve the prospects of labour market ‘outsiders’. Although greatest emphasis has been placed on labour market reforms aimed at increasing labour market flexibility and supporting workers’ transitions, the European Commission has also associated flexicurity with internal flexibility and high-performance work systems (HPWS); the latter supposedly provides workers with more autonomy and a greater say in decision-making, continuous skill upgrading and flexible working patterns that might enable workers to achieve a reasonable work-life balance (European Commission, 2007). The evidence concerning the impact of internal flexibility on performance is mixed, but tends to suggest that functional flexibility and practices such as vocational training contribute to productivity improvements (e.g. Colombo & Stanca, 2014; Fay, Shipton, West & Patterson, 2015; Guzzo & Dickson, 1996; Konings & Vanormelingen, 2010). However, this does not necessarily imply positive outcomes for worker in terms of, for example, work intensity, job satisfaction and control of their jobs (Geary & Dobbins, 2001; Harley, Sargent & Allen, 2010).

Despite the importance of internal flexibility to the flexicurity agenda and economic performance, the attention of policy makers continues to focus mainly on numerical flexibility. Since the start of the economic crisis, several countries, including France, the Netherlands, Sweden, and Slovenia, have received specific recommendations aimed at increasing labour

market flexibility (Schömann, 2014, p. 15-18) and across the EU there has been a tendency for governments to dilute the strength of employment protection legislation (Author B, 2015). Reforms aimed at increasing employers' freedom to make use of fixed-term contracts have also been widespread. Countries including the Czech Republic, Greece, Portugal, Romania and Spain have increased the maximum duration of fixed-term contracts. Others, such as Poland and the Netherlands, have increased the number of permitted contract renewals (Clauwaert & Schömann, 2012). While reforms were generally intended to be time-limited anti-crisis measures, and were subsequently partially or wholly reversed in some countries (e.g. Spain and Slovakia), other countries have retained the measures and in some cases enshrined them in legislation (Lang, Schömann & Clauwaert, 2013).

The consequences of fixed-term for productivity are a matter of debate. Some arguments focus on the impact of contingent workers on employees with regular contracts. One hypothesis in this vein is that productivity might increase if incumbent workers regard workers with fixed-term contracts as posing a potential threat to their jobs, thereby inducing them to work harder (Bryson, 2007: 132). Other arguments focus on the work effort and commitment of fixed-term employees and the potential for fixed-term employment to provide employers with a means of dealing with information asymmetries. Fixed-term jobs might offer employers a screening mechanism, enabling them to retain only those workers who they regard as being most 'productive' (Autor, 2001; Portugal & Varejao, 2009). The prospect of permanence might encourage higher work effort on the part of temporary employees, which might have positive implications for productivity, particularly if workers believe the probability of permanence to be high (Engelland & Ripahn, 2005; Ichino & Ripahn, 2005). However, other studies have argued that fixed-term employment can impact negatively on performance. Fixed-term workers tend to receive less training than those in standard employment and may not have time to develop the 'firm-specific skills' of those in regular jobs (Bryson, 2007; Cutuli & Guetto, 2012). Furthermore, if fixed-term employees perceive that their chances of improving upon their current situation are poor, motivation may be negatively affected (Appelbaum, Bailey, Berg, & Kalleberg, 2000; OECD, 2014). It is also possible that the presence of temporary employees will reduce the morale and effort of workers with permanent contracts (Davis-Blake, Broschak, & George, 2003; Battista & Vallanti 2013) and there can be difficulties in integrating non-standard employees into teams composed mainly of workers with regular contracts (Ward, Grimshaw, Rubery, & Beynon, 2001). To that extent, the use of fixed-term contracts might frustrate attempts to increase internal flexibility. Furthermore, there is evidence that numerical flexibility

can impede organisations' ability to innovate, thereby damaging long-term performance (Michie & Sheehan 2003, 2005; Roca-Puig, Beltrán-Martín, Bou-Llusa, & Escrig-Tena, 2008).

The consequences of fixed-term employment for productivity may also depend on the duration of contacts. Length of job tenure has been found to be positively associated with productivity, possibly because it leads to increased employee commitment and the creation of firm specific skills and knowledge (e.g. Dearden, Reed, & Reenen, 2006; Ng & Feldman 2010; Steffens, Shemla, Wegge, & Diestel, 2014). On the other hand, if tenure is extended as a consequence of fixed-term contracts being renewed, the affected workers may become demoralised and less committed (Saloniemi & Zeytinoglu, 2007), which might have negative implications for productivity. Much may depend on the extent to which temporary contracts act as 'stepping stones' to permanent jobs or 'traps' (Berton, Devicienti, & Pacelli, 2011). Transition rates to permanent employment vary considerably, being relatively high in Germany, Estonia, the Netherlands and Austria and relatively low in countries including Spain, France, Greece and Italy, where the share of involuntary temporary workers tends to be relative large (European Commission, 2014).

Strong employment protection legislation (EPL) for workers with regular contracts is widely assumed to reduce the willingness of employers to hire on a permanent basis, encouraging them instead to use fixed-term contracts, which in turn contributes to segmentation of the labour market and the creation of a pool of labour market 'outsiders' (e.g. OECD, 2004; Muffels & Luijkx, 2008). However, the freedom of employers to make use of fixed-term contracts is limited by employment regulations relating to temporary jobs, which differ between countries in terms of the obligations and restrictions they impose. Furthermore, EPL is but one factor that might influence the propensity of employers to retain workers and offer permanent employment. Gash (2008) found that, despite having relatively strong EPL, routes to permanent employment were better in Germany than in France, the UK or Denmark. Gash suggested that this finding reflected the characteristics of Germany's systems of industrial relations and vocational education training. It is also possible that company and workplace-level industrial relations practices and institutions will affect retention and transitions. Trade unions and other employee representatives might be expected to have an interest in the extent of fixed-term employment, how workers with fixed-term contracts are treated and the implications for their members' job security and terms and conditions. Heery (2009) has argued that approaches to contingent labour by UK unions have included attempts to 'exclude' contingent workers, acceptance of them as a

group of ‘subordinate’ workers who can provide a ‘buffer’ that might help to enhance the security of core workers, and more positive responses that emphasise inclusion in union governance and engagement and that seek to improve the position of contingent workers (which might include seeking agreements on transitions to permanency).

With these considerations in mind, we set out to address the following questions by examining data relating to EU 27 member states:

- (1) How do internal flexibility and use of fixed-term contracts affect labour productivity in the EU?
- (2) Does the retention of fixed-term contract workers have an impact on labour productivity?
- (3) What types of workplaces tend to retain workers after the completion of a fixed-term contract?

Methods

The study utilises data from the 2009 European Company Survey (ECS), which is a large-scale, Europe-wide survey of firms that covers the (then) EU-27 member states plus Croatia, Macedonia and Turkey. The universe for the survey comprised all private and public sector organisations with 10 or more employees, excluding those in the agriculture and fishing industries, private households and extra- territorial organizations. A stratified random sampling method was employed so as to ensure representation across different sectors and establishment sizes. Larger enterprises were oversampled and a weighting procedure was subsequently used to correct the resulting disproportions. The ECS collected information about HRM practices, employment relations and establishment performance via national fieldwork agencies, which conducted Computer Assisted Telephone interviews with the most senior manager with responsibility for personnel matters and, where possible, employee representatives from the same organisations.

Management interviews were conducted for 27,160 establishments, from a population of 3.2 million. The survey was conducted between January and May 2009. In some countries a screening procedure was used to identify eligible establishments within multi-site companies. Response rates in countries in which the screening procedure was used ranged from 65% (Spain) to 17% (Hungary). In countries in which screening was not used response rates ranged from 11%

(the Netherlands) to 54% (Latvia) (further information is available in Eurofound 2011: 89-92). For the purpose of this study, we focused only on the 27 countries that were members of the EU at the time the data were collected. The total number of valid responses was 24,640 establishments. The data have three distinctive strengths: a wide coverage of countries, harmonised data and sample homogeneity. In addition, there are very few missing data (the variable with the most missing data is the percentage of skilled workers, which is missing for 223 out of 24640 (i.e. less than one per cent of) organizations. We adopted an available-case approach to deal with instances of missing data.

As establishments are nested within countries and the information we are interested in was measured primarily at the ordinal level, we adopted a multilevel mixed-effect ordinal logistic modelling approach, which takes into account the dependent nature of the measurements at both establishment and country levels (Hox, 2010). The inclusion of 27 countries in the sample is sufficient to derive reliable estimates via a multi-level regression method (Bryan & Jenkins, 2013). We used STATA 13 to estimate a model of labour productivity relating to comparative performance and another that related to performance when compared with the situation three years prior to the survey. For each outcome variable we included a contractual flexibility item to test the use of fixed-term contracts on labour performance (the findings are presented in Tables 4 and 5). For those organisations that used fixed-term contracts, we also ran a multilevel regression to examine the potential determinants of retaining workers whose fixed-term contracts had expired (shown in Table 7). For all the models, we first ran an intercept only model and then proceeded to include organizational characteristics and other relevant control variables.

A ‘variance of inflation factor’ test, which is a test to check for multicollinearity, was conducted on the pooled sample. The value in our model specifications ranged from 1.01 to 1.92, well below the threshold level of 10.0. The restricted maximum likelihood estimation method was employed. The deviance statistics (-2 Log likelihood) are also reported.

Dependent variables

The dependent variables are as follows:

1. The labour productivity of establishments compared with that of other establishments in the same sector.
2. The labour productivity of establishments compared to their productivity three years ago.
3. Propensity of establishments to retain fixed-term workers.

The values of the three dependent variables were measured using a four-point scale. In relation to the first item, managers were asked to assess whether labour productivity relative to other establishments was a lot better (16%), somewhat better (35%), about average for the industry (46%) or below average (2%). Because of the small number of respondents in the final category, the ‘average’ and ‘below average’ groups were merged. For the second dependent variable managers were asked to indicate whether labour productivity had increased considerably (22%), slightly (35%), remained about the same (30%) or decreased (13%). The third dependent variable measures retention of workers. Managers in the 14,167 establishments that used fixed-term contracts were asked whether a follow-on contract had been given to all (24%), most (31%), some (23%) or none of those employees whose fixed-term contract had expired (42%). The coding of each of the dependent variables was reversed in the analysis, so that higher scores indicated better performance or retaining more workers.

The first two variables reflect managers’ subjective assessment of labour productivity. It is common for studies of the relationship between HRM/employment relations and performance to rely on the subjective assessments of managers (e.g. Delaney & Huselid, 1996; Guthrie, 2001) and such assessments have been shown to accord well, although not perfectly, with objective measures (Wall, et al., 2004). Admittedly there are limitations in relying on self-reporting by individual managers and in the absence of ‘harder’ evidence relating to productivity it is not possible to verify the accuracy of their views.

Independent variables

The analysis included the following independent variables:

Use of fixed-term contracts was measured by a categorical variable: (1) no fixed-term contracts (permanent contracts only or predominantly permanent contracts with some use of agency workers), 40%; (2) employing fixed-term contract workers but retaining none after their contracts expired, 15%; (3) employing fixed-term contract workers and retaining some workers after the end of their fixed-term contract, 13%; and (4) employing fixed-term contract workers and retaining most or all of them, 32%.

We included a number of variables that were intended to capture information about aspects of ‘internal flexibility’, as presented in Table 1. Here we examined practices that might support internal flexibility (such as training) or practices that represented a form of internal flexibility. The variables were as follows: *Skilled work*; *Teamwork* and *Team autonomy*; *Check needs for further training*; *Time off for training*; *Flexible hours of work*.

TABLE 1 ABOUT HERE

We included variables that were intended to capture the influence of national and establishment level labour institutions and industrial relations practices. Given the potential influence of EPL on the propensity of employers to employ on a fixed-term basis, we included measures of the strength of EPL for workers with regular contracts and with temporary contracts. These were taken from the OECD’s EPL index series. The scores for each country are provided in Appendix 1, together with valid number of responses from establishments in each EU member state.

The variables, from both employee representative and management questionnaires, relating to the presence of a formal employee representation body and the involvement of representatives in decisions relating to fixed-term workers include: *Presence of a formal employee representation body*; *Employee representatives’ influence on employment decisions*; *Consultation of employee representatives on the use of FTCs*; *Employee representatives’ view of the relationship with management*; *Managements’ view of the employee representation body*. These measurements are detailed in Table 2.

TABLE 2 ABOUT HERE

Establishment size and sector were included as control variables, reflecting the survey design and the potential association between these variables and labour productivity (Eurofound,

2011). When describing the use of fixed-term contracts across countries (see Figure 1), we take into account the establishment proportional weights.

Establishment size: The establishment size categories, measured by the number of employees on the payroll, were 10-19 employees (26% of the sample), 20-49 employees (27%), 50-249 employees (29%), and 250 and above (17%).

Sector: The exploratory analysis (reported below) showed that the percentage of establishments that made use of fixed-term contracts did not vary a great deal across different sectors. We therefore included three broad business activity categories in the investigation of labour productivity (Table 3 and 4): manufacturing (40%); private services (39%) and public services (21%). The majority of these establishments were in the private sector (18, 777, accounting for 76% of the sample).

Establishments that experienced structural changes in the past three years (such as a takeover, a relocation or the acquisition of another organization) were more likely to participate in the survey than those that had not experienced a change (Eurofound, 2011). Twenty-seven percent of the establishments in the sample had experienced changes. Such changes imply a period of uncertainty and instability, which might incline establishments to make greater use of fixed-term contracts.

Findings

We begin by examining the extent to which workplaces make use of fixed-term contracts. We also assess whether the propensity of firms to employ workers on fixed-term contracts varies by country, sector and establishment size. The most substantial difference in terms of using and retaining fixed-term contract workers (measured by establishments retaining most or all workers immediately after the expiration of their fixed-term contract) are by country and by establishment size. Based on the weighted data, Figure 1 shows the percentage of establishments by country that used fixed-term contracts as well as the percentage that had retained workers when their initial contract expired (this figure is based on those establishments that employed any workers on fixed-term contracts). Overall, 48% of establishments across the EU employed workers on fixed-term contracts. On average, establishments in the EU-15 employed a higher percentage of workers on fixed-term contracts (53%) than countries that joined the EU from 2004 onwards (42%), although the percentage that retained workers was very similar (48% of

the former group and 50% of the latter). In some countries, specifically Germany, Finland, France, Italy, Netherlands, Portugal, Sweden, Czech Republic, Poland and Slovenia, more than 60% of establishments reported that they employed at least some workers on fixed-term contract, while in others, such as Austria and Cyprus, the proportion was less than one-fifth. There was also cross-country variation in the propensity of establishments to retain workers. Among those EU member states that made heavy use of fixed-term contracts, more than two-thirds of establishments in Germany, Netherlands, Czech Republic, Poland, and Slovenia retained most or all fixed-term workers. By contrast, the percentage was less than 40% in Finland and France. On the other hand, almost 60% of the small proportion of establishments in Austria that made use of fixed-term contracts retained most or all workers.

FIGURE 1 ABOUT HERE

The use of fixed-term contracts increases with the size of the establishment. Almost half of all small establishments (10-19 employees) in the EU 27 reported using non-standard contracts. The equivalent proportion for firms with 500 or more employees was almost nine-tenths. In addition, we find that there are no substantial differences between sectors in terms of the proportion of establishments employing workers on fixed-term contracts. The lowest percentage was in the wholesale and retail sector (43%) and the highest in the professional, scientific and technical activity sector (56%). On average, 26% of all establishments retained *most* workers whose fixed-term contract expired, ranging from 15% in the case of the information and communication sector to over 30% of establishments involved in professional, scientific and technical activities.

The empirical analysis now turns to investigate the relationship between internal flexibility, fixed-term contracts and labour productivity. Regressions with and without post-stratification weights were conducted. The results were very similar and we have therefore based our regression analysis on the unweighted regressions, as recommended by Carle (2009). A preliminary correlation analysis is reported in Table 3. It shows that our various measures of internal flexibility are positively correlated with labour productivity. The employment of highly-skilled workers is negatively correlated with the use of fixed-term contracts. Establishments that systematically check the training needs of workers with fixed-term contracts and that offer time-off training are more likely to retain workers whose fixed-term contracts have expired. Retention

of workers is positively correlated with higher labour productivity and increases over time. Organizations that experienced major changes were more likely to undertake internal changes.

TABLE 3 ABOUT HERE

Since establishments are nested within countries we carried out multiple level analyses with establishments at level 1 and countries at level 2. As can be seen in Step 1 of Tables 4 and 5, there is substantial variance between countries in terms of managers' evaluation of labour productivity (12% and 6%), but the most important sources of variation are at the level of the organisation. We then examine the potential impact of fixed-term contract usage on labour performance and the relevant findings are reported in steps 2 and 3 in each of the Tables. We also investigated the potential impact of labour utilisation practices on establishment performance by size (steps 4 and 5) in each Table.

After controlling for organization size and sector, the findings for the whole sample in both steps 2 and 3 indicate that practices that might support or indicate internal flexibility, such as a high proportion of highly-skilled workers, team autonomy, training check and flexible hours of work, are positively and significantly associated with managers' evaluations of labour productivity relative to competitors and also with their assessment of labour productivity increases over time.

Step 3 of Table 4 shows that establishments that either employed no fixed-term contract workers, or employed them and retained most or all of them after the end of the fixed-term contract, performed significantly better in terms of relative labour productivity when compared to those establishments that employed workers on fixed-term contracts and did not retain them. The findings in steps 4 and 5 confirm that retaining workers after the end of their fixed-term contract makes a significant contribution to labour productivity, especially among SMEs.

Step 3 of Table 4 shows that establishments that employed workers on fixed-term contracts and retained them were significantly more likely to experience labour productivity improvements over time than those establishments that did not retain workers. Again the findings in steps 4-6

confirm that retaining workers after the end of their fixed-term contract makes a significant contribution to labour productivity increases, particularly among SMEs.

TABLES 4 AND 5 ABOUT HERE

In addition, the study explored influences on establishments' propensity to retain workers whose fixed-term contracts had expired. This part of the analysis includes only those workplaces that employed workers on fixed-term contracts, which means that the sample was reduced to 14,167 establishments.

To assess the influence of formal employee representation on the willingness of establishments to retain workers at the end of their fixed-term contract, we included the variables listed in Table 2. The variables were extracted from the survey of employee representatives and the survey of managers in an attempt to minimise the common method bias. The correlations between these variables are show in Table 6. They confirm the consistency of mutual rating, reflected in a significant correlation between management's positive view of employee representation bodies and employee representative's positive view of the relationship with management ($p < 0.01$).

TABLES 6 AND 7 ABOUT HERE

Step 1 in Table 7 shows that there is substantial variation (34 percent) between countries in terms of establishments' propensity to retain workers. In Step 2 we include establishment and country-level control variables. For the former, we include variables which relate to employment relations; for the latter, we include measures of the strength of EPL for regular and temporary workers. In Step 3, we include variables that relate to internal flexibility practices.

Step 2 suggests that good relations between management and formal employee representation bodies are positively and significantly correlated with the propensity to retain most fixed-term employees. This finding holds for both management's positive perception of the benefits of involving employee representatives and the representatives' belief that both management and employee representatives make sincere efforts to solve problems. However, the involvement of

employee representatives in the creation of rules and procedures relating to fixed-term workers appears to have a negative, but statistically insignificant association, with retention. The ability of employee representatives to influence employment and HR decisions is positively associated with retention, but the coefficients are not statistically significant. The findings also show that the strength of EPL for regular contracts is negatively correlated with the propensity of firms to retain workers and that the EPL index for temporary contracts is positively correlated with retention. However, neither finding is statistically significant.

In Step 3 we see that establishments that systematically checked the training needs of workers with fixed-term contracts; provided those workers with time off for training, or emphasized team work were more likely to retain workers once their fixed-term contract came to an end. The association between managers' views regarding the benefits of employee representation and the propensity to retain fixed-term workers is no longer significant. Employee representatives' view of management continues to be statistically significant, but the findings suggest that the dominant influences are those that are related to the organisation of work and the skill requirements of the organisation. Those establishments that were most likely to retain workers were those with labour utilisation practices associated with internal flexibility.

Conclusion

This paper has provided an investigation of the relationship between fixed-term employment and productivity that encompasses almost the entire EU. It has demonstrated that establishments that employ no workers on fixed-term contracts tend to perform better in labour productivity terms than those that employ on a fixed-term basis. Poorer performance is particularly evident among those establishments that renew the contracts of few or no workers once their fixed-term contract has come to an end. Establishments that renew most contracts tend to perform better. The finding points to the importance of continuity in employment and job security, which the European Commission has tended to regard as an outmoded policy goal, emphasising instead the need to enhance employment security via policy measures consistent with the principles of flexicurity (European Commission, 2007).

Since the financial crisis of 2008 many EU countries have taken steps to increase employers' freedom to hire workers on a fixed-term basis and also to make dismissals. The intention of policy makers has been to reduce unemployment and stimulate economic recovery. To date,

however, labour market liberalisation in the EU has failed to make an appreciable impact on unemployment, which has continued to increase in many of the countries that have gone furthest in implementing reforms (Author B, 2015). Furthermore, the evidence we have presented in this paper suggest that the long-term performance of these economies will not be improved by encouraging a greater use of fixed-term employment. Workers with fixed-term contracts receive less employer-funded training than permanent employees, which may make them relatively less productive and also affect their chances of moving into more secure employment (Forrier & Sels, 2003). Evidence from a number of EU countries suggests that temporary jobs can serve as career traps rather than stepping stones (Korpi & Levin, 2001; Scherer, 2004) and it is clear that young workers in particular are facing longer and more complex education-to-work transitions, involving increasingly differentiated trajectories and less security than in the past (Green, 2013).

Although our paper relies on cross-sectional data and we cannot, therefore, draw conclusions about causality, our findings nevertheless complement those of other studies (for example, Colombo & Stanca, 2014; Fay et al., 2015) in demonstrating that establishments with practices related to internal flexibility tend to perform better than those in which such practices are absent. Although rarely foregrounded by the European Commission, internal flexibility is also a facet of its flexicurity agenda, albeit one that has largely been treated as separate to contractual flexibility. Our findings, however, indicate that the two forms of flexibility are related in that labour utilisation practices associated with internal flexibility are likely to encourage establishments to retain workers following the completion of their fixed-term contract. This might reflect the extent to which fixed-term workers become embedded in teams and develop forms of firm-specific skills and knowledge that cannot easily be replaced by hiring from the external labour market. One limitation of the ECS survey data, however, is that there is no way of knowing how many retained workers were offered a permanent contract upon completion of their fixed-term contract, as opposed to a further fixed-term contract. While some government have reformed fixed-term work regulations to permit additional renewals of fixed-term contracts, this will serve to perpetuate job insecurity and greater attention therefore needs to be paid to building pathways to permanent contracts. In general, efforts by policy makers to improve transitions have focused on reducing the strength of EPL, yet our analysis found that across the EU the association between EPL and the readiness of employers to retain workers following the completion of a fixed-term contract was statistically insignificant. This does not mean that EPL has no influence on employer perceptions and behaviours concerning the contractual mixes that they use and the relationship between EPL for regular and temporary employment and its effects

on firms located in particular sectors and countries are issues that would benefit from further research. However, in line with Gash (2008), we suggest that pathways to permanence are likely to be influenced by the interplay of institutions and practices at national, sectoral and establishment levels and those government policies that target EPL alone are unlikely to support transitions to more secure employment.

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Table 1: Labour flexibility variables

Variable measurement	Percentage	Number of valid cases (n=24,640)
<i>Use of fixed-term contracts</i>		
<i>Permanent contract only</i>	40%	24,640
<i>Use fixed-term contracts, none was renewed</i>	15%	24,640
<i>Use fixed-term contracts, some were renewed</i>	13%	24,640
<i>Use fixed-term contracts, most or all were renewed</i>	32%	24,640
Internal flexibility		
The percentage of skilled workers	25%	24,417
Work organized in teams (1=yes, 0=no)	64%	24,640
Team granted autonomy (1=yes, 0=no)	24%	24,640
Check needs for further training ¹ (1=yes, 0=no)	52%	24,640
<i>Time off for training: Employees were given time off to undergo further training in the past 12 months (1=yes, 0=no)</i>	62%	24,640
<i>Flexible hours of work: Percentage of workforce that is entitled to make use of flexible working time</i>	31%	24,640

¹ Only one-third of these establishments systematically checked the training needs of employees with a fixed-term contract. The analysis in Tables 3 and 4 includes all employees. In Table 6, only training checks in relation to fixed-term employees are included.

Table 2 Influence of formal Employee Representation body on labour utilisation

Variable measurement	Mean /percentage	Number of valid cases (n=14,755)
<i>Presence of a formal employee representation body:</i> a range of options, reflecting the enterprise-level industrial relations institutions that are typical in their country of operation (1=yes, 0=no).	51%	14,775
<i>Employee representatives' influence on employment decisions:</i> employee representatives indicate the strength of the influence of employee representation on management decisions in relation to 'employment and human resource planning' (1 = very weak to 4 = very strong)	3.28	4,679
<i>Consultation of employee representatives on the use of FTCs:</i> employee representatives were asked whether or not had been involved in establishing rules and procedures for fixed-term contracts, either via consultation or negotiation (1=yes, 0=no).	11%	14,755
<i>Employee representatives' view of the relationship with management:</i> employee representatives were asked to indicate the extent to which they agreed with the statement 'management and employee representation make sincere efforts to solve common problems (1 = strongly disagree to 5 = strongly agree).	2.33	4,571
<i>Managements' view of the employee representation body:</i> managers were asked to indicate the extent to which they agreed with the statement 'employee representation helps us in a constructive manner to find ways to improve workplace performance' (1 = strongly disagree to 5 = strongly agree).	3.61	9,008

Table 3: Correlations between main variables in Table 4 and 5

Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11
1. Higher Productivity	3.62	0.83	1										
2. Increased Productivity	3.54	1.20	0.25**	1									
3.Retain FTC workers	3.34	1.41	0.05**	0.05**	1								
4. Percentage of workforce defined as skilled	0.25	0.29	0.10**	0.09**	0.00	1							
5.Train permanent workers	0.68	0.46	0.07**	0.10**	0.01	0.14**	1						
6.Train FTC workers	0.36	0.47	0.09**	0.07**	0.16**	0.11**	0.47**	1					
7. Time-off for training	0.62	0.48	0.06**	0.08**	0.06**	0.11**	0.22**	0.18**	1				
8. Flexible hours	0.31	0.40	0.06**	0.05**	-0.00	0.17**	0.07**	0.04**	0.07**	1			
9. Team autonomy	0.20	0.40	0.07**	0.06**	0.00	0.08**	0.03**	0.02**	0.02**	0.09**	1		
10. Major changes	0.27	0.44	0.06**	0.06**	0.04**	0.04**	0.06**	0.08**	0.07**	0.02**	-0.00	1	
11. Internal changes	0.60	0.48	0.05**	0.08**	0.00	0.04**	0.12**	0.09**	0.12**	0.08**	0.02**	0.45**	1

Note: * p<0.05; **p<0.01(weight based on establishment)

Table 4: Labour productivity compared with that of competitors

Dependent variable: a lot higher labour productivity	Coef. (S.E)	Coef. (S. E.)	Coef. (S. E.)	Coef. (S. E.)	Coef. (S. E.)
Fixed effect (Establishment level)	Step 1	Step 2	Step 3	Step 4	Step 5
Use of fixed-term contracts flexibility	Intercept only			250+	10-249
Compared with no FTCs were renewed					
Permanent only			0.14(0.04)***	0.13(0.12)	0.17(0.05)***
Some are renewed			-0.06(0.02)	-0.11(0.11)	-0.02(0.02)
Most or all are renewed			0.12(0.04)***	0.10(0.10)	0.14(0.04)***
Internal flexibility					
Percentage of workers that are skilled		0.46(0.05)***	0.47(0.05)***	0.39(0.14)***	0.49(0.05)***
Having time off for training		0.11(0.02)***	0.11(0.03)***	0.18(0.08)**	0.11(0.03)***
Percentage of workforce with flexible hours		0.14(0.03)***	0.14(0.03)***	0.04(0.09)	0.16(0.04)***
Having team autonomy		0.24(0.03)***	0.24(0.01)***	0.35(0.08)***	0.21(0.04)***
Having incentive pay		0.23(0.03)***	0.23(0.03)***	0.14(0.07)**	0.24(0.03)***
Establishment characteristics					
Experienced major changes		0.14(0.04)***	0.14(0.01)***	0.03(0.03)	0.15(0.03)***
Internal changes		0.12(0.03)**	0.13(0.01)***	0.18(0.07)**	0.13(0.03)**
Establishment size (base group: 10-19)					
20-49		0.01(0.03)	0.02(0.03)		0.01(0.04)
50-249		-0.08(0.03)**	-0.06(0.03)*		-0.07(0.04)**
250-499		-0.12(0.05)**	-0.09(0.05)*	-0.11(0.06)*	
500+		-0.08(0.06)	-0.05(0.06)		
Sector (base: manufacturing)					
Private service		0.18(0.03)***	0.18(0.03)***	0.22(0.07)***	0.17(0.03)***
Public service		0.23(0.04)***	0.25(0.04)***	-0.19(0.09)**	0.36(0.04)***
Random effect (variance components)					
Country level (intercept)	0.13	0.12	0.12	0.19	0.11
Establishment level (Residual)					
Threshold 1	-0.07(0.07)	0.47(0.07)	0.58(0.08)	0.38(0.16)	0.63(0.08)
Threshold 2	1.66(0.07)	2.24(0.08)	2.35(0.08)	2.27(0.17)	2.39(0.08)
-2*Log pseudo likelihood	21941.34*2	21537.02*2	21522.38*2	3764.32*2	17723.64*2
Number of establishments	21,952	21,807	21,807	3,840	17,967
Chibar2	598.25	544.06	492.63	125.81	373.92

Note: * p<0.1; ** p<0.05; ***p<0.01

Table 5: Labour productivity compared with three years ago

Dependent variable: increased labour productivity	Coef. (S.E.)	Coef. (S. E.)	Coef. (S. E.)	Coef. (S.E.)	Coef. (S.E.)
Fixed effect (Establishment level)	Step 1	Step 2	Step 3	Step 4	Step 5
	Intercept only			250+	10-249
Compared with no FTCs were renewed					
Permanent only			-0.05(0.04)	0.04(0.11)	-0.05(0.04)
Some are renewed			-0.04(0.04)	-0.05(0.10)	-0.03(0.05)
Most or all are renewed			0.11(0.02)***	0.03(0.09)	0.15(0.04)***
Internal flexibility					
Percentage of workers that are skilled		0.43(0.05)***	0.42(0.05)***	0.28(0.12)**	0.43(0.05)***
Having time off for training		0.20(0.01)***	0.30(0.01)***	0.19(0.07)**	0.19(0.03)***
Percentage of workforce with flexible hours		0.11(0.01)***	0.11(0.01)***	0.04(0.04)	0.12(0.03)***
Having team autonomy		0.21(0.03)***	0.20(0.03)***	0.24(0.08)***	0.19(0.03)***
Having incentive pay		0.25(0.03)***	0.24(0.03)***	0.22(0.06)***	0.25(0.03)***
Establishment characteristics					
Experienced major changes		0.20(0.03)***	0.20(0.03)***	0.14(0.07)**	0.20(0.04)***
Internal changes		0.36(0.03)***	0.35(0.03)***	0.38(0.07)***	0.35(0.03)***
Establishment size (base: 10-19)					
20-49		0.12(0.03)***	0.11(0.03)***	-	0.10(0.03)***
50-249		0.15(0.03)***	0.12(0.03)***	-	0.11(0.03)***
250-499		0.25(0.05)***	0.21(0.05)***	-0.13(0.05)**	-
500+		0.31(0.05)***	0.27(0.05)***	-	-
Sector (base: manufacturing)					
Private service		0.11(0.01)***	0.11(0.01)***	0.00(0.03)	0.13(0.03)***
Public service		0.24(0.02)***	0.23(0.02)***	-0.01(0.04)	0.31(0.04)***
Random effect (variance components)					
Country level (intercept)	0.06	0.06	0.06	0.07	0.06
Threshold 1	-1.95(0.05)	-1.14(0.06)	-1.17(0.06)	-1.89(0.14)	-1.11(0.07)
Threshold 2	-0.31(0.04)	0.55(0.06)	0.52(0.06)	-0.02(0.12)	0.56(0.07)
Threshold 3	1.26(0.05)	2.18(0.06)	2.15(0.06)	1.71(0.14)	2.17(0.07)
-2*Log pseudo likelihood	30593.94*2	29853.24*2	29837.39*2	5050.45*2	24763.51*2
Number of establishments	23239	23,088	23,088	4029	19059
Chibar2	377.29	376.02	349.46	43.13	284.35

Note: * p<0.1; ** p<0.05; ***p<0.01

Table 6: Correlations between main variables in Table 7

Variables	1	2	3	4	5	6
1 Retaining fixed-term contract workers	1					
2 Presence of a formal employee representation body	0.01	1				
3 Consultation of employee representatives on the use of FTCs	0.01	0.33**	1			
4 Employee representatives' influence on employment decisions	0.00	-0.01	0.19**	1		
5 Managements' view of the employee representation body	-0.00	-0.01	0.04**	0.11**	1	
6 Employee representatives' view of the relationship with management	0.03*	-0.00	0.12**	0.32**	0.14**	1

Note: *p<0.05; ** p<0.01

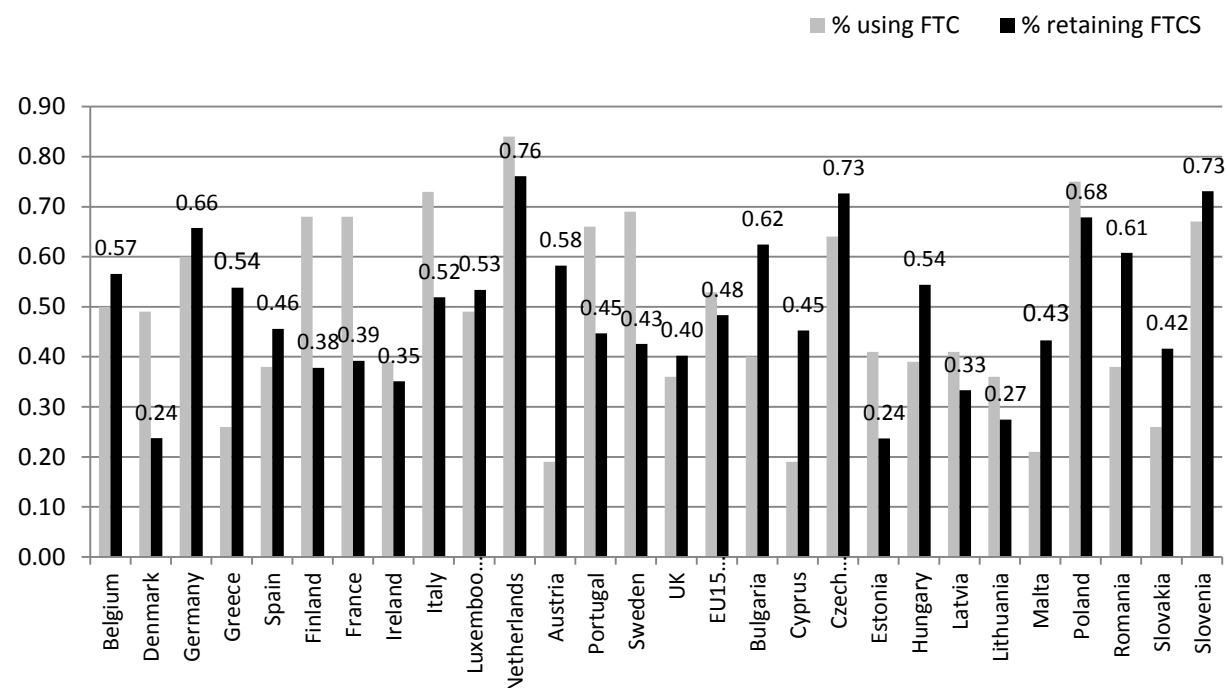
Table 7: Influences on the decision to retain fixed-term contracted workers

Dependent variable: retain all fixed-term contract workers	Coef. (S. E.)	Coef. (S. E.)	Coef. (S. E.)
Fixed effect (Establishment level)	Step 1	Step 2	Step 3
Internal flexibility	Intercept only		
Percentage of workforce defined as skilled			0.08(0.10)
Check training needs for employees with fixed term contract			0.47(0.05)***
Provided time off for training in past 12 months			0.13(0.07)**
Compared with no team work (base group)			
Having team work			0.21(0.08)**
Having team autonomy			0.18(0.10)**
Employment relations			
Presence of a formal employee representation body		0.03(0.01)	0.09(0.34)
Employee representation influence on employment and HR planning		0.03(0.04)	0.03(0.04)
Managements' view of the employee representation body		0.03(0.01)**	0.01(0.01)
Consultation of employee representatives on the use of FTCs		-0.04(0.02)	-0.03(0.06)
Employee representatives' view of the relationship with management		0.06(0.03)*	0.06(0.03)*
EPL for regular contracts		-0.01(0.11)	-0.01(0.18)
EPL for temporary contracts		0.09(0.12)	0.11(0.12)
Establishments Size(base:10-19) (in five categories)			
20-49		0.06(0.13)	0.04(0.13)
50-249		0.24(0.12)	0.16(0.12)
250-499		0.26(0.13)	0.13(0.13)
500+		0.29(0.13)	0.15(0.13)
Sector (base: manufacturing)			
Private services		0.24(0.06)***	0.22(0.07)***
Public services		0.25(0.06)***	0.17(0.07)***
Random effect (variance components)			
Country level (intercept)	0.34	0.37	0.35
Threshold 1	-1.31(0.11)	-0.32(0.85)	0.11(0.84)
Threshold 2	-0.16(0.11)	1.07(0.85)	1.53(0.84)
Threshold 3	1.29(0.11)	2.78(0.86)	3.25(0.84)
-2*Log pseudo likelihood	18953.15*2	5783.44*2	5694.78*2
Number of establishments	14,167	4,408	4,373
Chibar2	1067.66	302.80	259.35

Note: * p<0.1; ** p<0.05; ***p<0.01

Figures

Figure 1: % establishments using FTCs and % of establishments renewing FTC workers' contracts by country (weighted data)



Appendix 1: Number of respondents and EPL index scores

Country	Sample size in 2009	EPL for Regular contract	EPL for Non-standard Contract
Belgium	1,016	2.95	2.42
Denmark	1,023	2.35	1.8
Germany	1,500	3.09	1.54
Greece	1,005	2.85	3.17
Spain	1,509	3	3.5
Finland	1,000	2.17	1.88
France	1,500	2.82	3.76
Ireland	503	1.98	0.71
Italy	1,502	3.03	2.71
Luxembo	501	2.74	3.83
Netherlan	1,002	2.88	1.17
Austria	1,016	2.44	2.17
Portugal	1,012	3.69	2.29
Sweden	1,001	2.52	0.79
UK	1,510	1.71	0.42
Bulgaria	502	3.1	4
Cyprus	505	2.17	0.3
Czech	1,014	2.79	1.88
Estonia	500	2.78	2.29
Hungary	1,045	2.27	1.92
Latvia	509	2.69	1.79
Lithuania	560	2.79	2.5
Malta	349	2.5	2.5
Poland	1,500	2.39	2.33
Romania	500	1.5	4.5
Slovakia	520	2.64	2.17
Slovenia	536	2.7	2.5

Note: Most of the EPL scores are from the OECD and relate to 2009. The 2009 EPL scores for Bulgaria, Cyprus, and Romania are derived from the ILO's EPLex database.